

Message Text

CONFIDENTIAL

PAGE 01 LUSAKA 00665 031539Z
ACTION FAA-00

INFO OCT-01 AF-10 EUR-12 NEA-10 ISO-00 CAB-02 CIAE-00
COME-00 DODE-00 DOTE-00 EB-08 INR-10 NSAE-00 L-03
IO-13 /069 W

-----104647 040047Z /15

R 031326Z MAR 78
FM AMEMBASSY LUSAKA
TO SECSTATE WASHDC 7746
INFO FAA BRUSSELS
&/FAA MONROVIA
AMEMBASSY TEHRAN

C O N F I D E N T I A L LUSAKA 0665

FAA WASHDC FOR AED-1, ARD-1, AEM-6, AIA-2

TEHRAN PLS PASS FAA EDWARDS

E.O. 11652: GDS
TAGS: EAIR, ZA
SUBJ: DOPPLER VS TRSB MICROWAVE LADNDING SYSTEM IN ZAMBIA

REF: (A) STATE 052233, (B) LUSAKA 0666

1. AFTER PRESENTATIONS BY BOTH BRITISH AND FAA TEAMS, ZAMBIA IS STILL UNDECIDED ON MICROWAVE LANDING SYSTEM IT WOULD PREFER. THIS IS PERHAPS ACADEMIC SINCE IT NOW SEEMS UNLIKELY THAT ZAMBIA WILL SEND ANYONE TO MONTREAL MEETING. NEVERTHELESS, EMBASSY WILL BE ALERT TO POSSIBILITY THAT ZAMBIA WILL AUTHORIZE THEIR AMBASSADOR IN OTTAWA TO VOTE ON ISSUE. EMBASSY WILL NOT PUSH THIS SUGGESTION, HOWEVER, BECAUSE ZAMBIA PROBABLY LEANS TOWARDS UK DOPPLER SYSTEM DUE TO EXTENSIVE BRITISH INFLUENCE IN DEPARTMENT OF CIVIL AVIATION HERE.

2. EMBASSY OFFICER ATTNEDED A SHOWING MARCH 2 OF
CONFIDENTIAL

CONFIDENTIAL

PAGE 02 LUSAKA 00665 031539Z

BRITISH MADE 30 MINUTE FILM ON UK DOPPLER SYSTEM AND ITS MANY ADVANTAGES OVER US TRSB SYSTEM. FILM IS VERY PROFESSIONALLY MADE AND CLEVERLY EMPHASIZES BAD POINTS OF TRSB AND GOOD POINTS OF DOPPLER SYSTEMS. AMONG ITEMS MENTIONED IN FILM ARE SEVERAL WHICH SEEM TO BE, IF NOT MISREPRESENTATIONS, AT LEAST EXAGGERATIONS. BASIC CONCEPT OF BOTH DOPPLER AND TRSB ARE EXPLAINED AND THAT IN IDEAL SITUATION TRSB WOULD

WORK OKAY BUT IN REALITY IT IS TOO COMPLEX AND SUBJECT TO UNNOTICED PARTIAL SYSTEM FAILURES. TRSB SUBJECT TO SIDE LOADS ON BEAM WHICH CAN GIVE ERRONEOUS DATA. DOPPLER IS THE MUCH MORE ACCURATE SYSTEM, WITH RESOLUTION POSSIBLE TO ONE FOUR THOUSANDTH OF A DEGREE. BIG ISSUE IS MADE OF FACT THAT, UNDER DOPPLER, AIRCRAFT IS CONTINUALLY READING ITS POSITION, WHEREAS UNDER TRSB IT IS ONLY READING IT AS THE BEAM PASSES (IMPLYING THAT AIRCRAFT MOVEMENT IN THE INTERIM MEANS INSTRUMENT READOUT IS ERRONEOUSLY). ANIMATION OF TRSB SHOWS BEAM MOVING VERY SLOWLY ACROSS PATH AND NO WHERE DOES FILM STATE THAT BEAM MOVES AT THREE TIMES PER

SECOND. DOPPLER MEASUREMENTS ARE DESCRIBED AS FIVE HUNDRED TIMES LONGER IN TIME THAN TRSB, AND DOPPLER MAKES FIVE TIMES AS MANY MEASUREMENTS AS TRSB. IT IS CLAIMED THAT TRSB BEAN CAN GIVE ERRONEOUS ANGLE INFORMATION BASED ON REFLECTED BEAN INTERFERENCE AND EXPLAINS WHY DOPPLER CONCEPT ELIMINATES, IN THEORY, REFLECTED INTERFERENCE. BIG POINT IS MADE OF THE MORE EFFECTIVE MONITORING POSSIBLE OF DOPPLER. TRSB SYSTEM CAN FAIL IN PART AND MONITOR WILL NOT NOTICE IT. HWEREAS DOPPLER MONITORING WILL INSTANTLY DETECT ANY PROBLEM. MONITORING EXPLANATION IS GIVEN WITH USE OF CARTOON OF MULTI-RACIAL CHILDREN ALL TALKING AT ONCE, WHICH RECEIVED LOTS OF LAUGHTER, IF NOT COMPREHENSION, FROM AUDIENCE. FILM ALSO EMPHASIZES THAT BRUSSELS COMPUTER SIMULATION WAS WITH NON-EXISTENT BUILDING AND CLAIMS LINCOLM LABORATOIRES CONFIDENTIAL

CONFIDENTIAL

PAGE 03 LUSAKA 00665 031539Z

CHEATED OR RIGGED TEST TO PROVE DOPPLER INFERIOR. DEMAND IS MADE THAT ALL LINCOLN LABORATOIRES TESTS ON MLS BE RECHECKED FOR ACCURACY AND IMPARTIALITY. CONSIDERABLE ATTENTION IS GIVEN TO AUTOLAND POSSIBILITIES OF DOPPLER MLS, SHOWING CAA'S HAWKER SIDDELEY 748 MAKING AUTOLANDS IN ALL SORTS OF AIRPORTS. CLAIM IS MADE THAT ONLY DOPPLER MLS MADE AUTOLAND AT BERN AIRPORT. FILM GLOSSES OVER SIZE OF DOPPLER AIRBORNE EQUIPMENT AND NEVER MENTIONS COMPARABLE COSTS OF TWO SYSTEMS. MENTION IN PASSING IS MADE THAT DOPPLER EQUIPMENT IN TEST AIRCRAFT WAS QUITE LARGE (ACTUALLY SEEMED TO FILL ONE WHOLE SIDE OF AIRCRAFT) BUT THEN FILM SHOWED A SMALL ILS ON-BOARD AVIONICS BLACK BOX AND STATES THAT SOON DOPPLER WILL BE "THIS SIZE," THERE IS NO MENTION OF AWOP PANEL DECISION OF LAST YEAR IN FAVOR OF TRSB AND CLEAR IMPLICATION IS THAT MEETING THIS YEAR WILL BE FIRST REAL EVALUATION OF THE TWO SYSTEMS.

3. FILM WAS SLICK PRESENTATION WHICH WAS WELL RECEIVED BY AUDIENCE, SOME OF WHO COMMENTED ON FAIRNESS OF FILM AND WONDERED WHY AMERICAN FILM HAD NOT MENTIONED DOPPLER SYSTEM AND COMPARE TWO SYSTEMS AS BRITISH FILM DID. EMBASSY OFFICER DID NOT ATTEMPT TO COUNTER INDIVIDUAL POINTS MADE IN UK

FILM BUT DID PROVIDE HANDOUTS OF TRSB BOOKLET PROVIDED BY
FAA TEAM DURING THEIR RECENT VISIT.
LOW

CONFIDENTIAL

NNN

Message Attributes

Automatic Decaptioning: X
Capture Date: 01 jan 1994
Channel Indicators: n/a
Current Classification: UNCLASSIFIED
Concepts: MEETINGS, MICROWAVE EQUIPMENT, NAVIGATIONAL AIDS
Control Number: n/a
Copy: SINGLE
Draft Date: 03 mar 1978
Decaption Date: 01 jan 1960
Decaption Note:
Disposition Action: RELEASED
Disposition Approved on Date:
Disposition Case Number: n/a
Disposition Comment: 25 YEAR REVIEW
Disposition Date: 20 Mar 2014
Disposition Event:
Disposition History: n/a
Disposition Reason:
Disposition Remarks:
Document Number: 1978LUSAKA00665
Document Source: CORE
Document Unique ID: 00
Drafter: n/a
Enclosure: n/a
Executive Order: GS
Errors: N/A
Expiration:
Film Number: D780098-0613
Format: TEL
From: LUSAKA
Handling Restrictions: n/a
Image Path:
ISecure: 1
Legacy Key: link1978/newtext/t197803110/aaaadplg.tel
Line Count: 119
Litigation Code IDs:
Litigation Codes:
Litigation History:
Locator: TEXT ON-LINE, ON MICROFILM
Message ID: 21a224b9-c288-dd11-92da-001cc4696bcc
Office: ACTION FAA
Original Classification: CONFIDENTIAL
Original Handling Restrictions: n/a
Original Previous Classification: n/a
Original Previous Handling Restrictions: n/a
Page Count: 3
Previous Channel Indicators: n/a
Previous Classification: CONFIDENTIAL
Previous Handling Restrictions: n/a
Reference: 78 STATE 52233, 78 LUSAKA 666
Retention: 0
Review Action: RELEASED, APPROVED
Review Content Flags:
Review Date: 27 apr 2005
Review Event:
Review Exemptions: n/a
Review Media Identifier:
Review Release Date: n/a
Review Release Event: n/a
Review Transfer Date:
Review Withdrawn Fields: n/a
SAS ID: 3129962
Secure: OPEN
Status: NATIVE
Subject: DOPPLER VS TRSB MICROWAVE LADNDING SYSTEM IN ZAMBIA
TAGS: EAIR, ZA
To: STATE
Type: TE
vdkgvwkey: odb://SAS/SAS.dbo.SAS_Docs/21a224b9-c288-dd11-92da-001cc4696bcc
Review Markings:
Sheryl P. Walter
Declassified/Released
US Department of State
EO Systematic Review
20 Mar 2014
Markings: Sheryl P. Walter Declassified/Released US Department of State EO Systematic Review 20 Mar 2014